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ABSTRACT

Five perspectives are offered on the possible relationships between second language (L2) teachers and researchers. Discussion begins with an overview of traditions and transitions in the approaches, values, and concerns of L2 teachers and researchers. This is followed by discussion and illustration of four of the five relationships, including: (1) coexistence of teaching and research activities, centered on similar topics, through individual approaches and goals; (2) collaboration of teachers and researchers in shared collection, analysis, and interpretation of data, action research, and ethnographic study; (3) complementarity of teaching and research toward theoretically motivated treatments, designed in a research context and studied in the classroom; and (4) compatibility of teaching and research interests with respect to cognitive and social processes of L2 learning and materials and activity selection for L2 teaching and research. It concludes with a summary of a project on content-based L2 teaching and learning that illustrates a fifth relationship, of convergence, across the four previous perspectives. Contains 125 references. (Author/MSE)

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The Teacher-Researcher Relationship: Multiple Perspectives and Possibilities

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This paper offers five perspectives on the multiple and possible relationships of second/foreign language (L2) teachers and researchers. It begins with an overview of traditions and transitions in the approaches, values, and concerns of L2 teachers and researchers. This is followed by discussion and illustration of four of the five relationships, including (1) coexistence of teaching and research activities, centered on similar topics, through individual approaches and goals; (2) collaboration of teaching and research efforts, in shared collection, analysis, and interpretation of data, action research, and ethnographic study; (3) complementarity of teaching and research skills, toward theoretically motivated treatments, designed in a research context, then studied in the classroom; and (4) compatibility of teaching and research interests, with respect to cognitive and social processes of L2 learning, and material and activity selection for L2 teaching and research. The chapter concludes with a summary of a project on content-based L2 teaching and learning, which illustrates a fifth relationship, of convergence, across perspectives (1)-(4).

Introduction

Education is a field that is filled with questions and concerns that are of mutual interest to teachers and researchers. Increasingly, the scope, complexity, and urgency of such questions and concerns in the education of second and foreign language (L2) learners bring teachers and researchers together in relationships that integrate their activities, efforts, skills, and knowledge. These relationships are further evident among teachers and researchers in the traditions they share, the transitions they have experienced, and the collegial connections they have sought to nurture and sustain. This chapter therefore begins with a review of traditions and transitions in L2 education that have impacted teachers and researchers in their work with L2 learners.

Traditions in the Teacher-Researcher Relationship

Traditionally, L2 teaching and research have had their share of support-

ers and skeptics, the former arguing that theirs was a better method for teaching or for carrying out research, the latter often abandoning methods, or combining them eclectically. At the same time, they strive toward a more principled approach to their work, in which no single method is believed to be effective in any prescriptive sense, but rather that teaching and research can be viewed as complex efforts whose questions and concerns require principled and situated approaches, and whose implementation depends on the wisdom and experience of language educators.

Teachers and researchers also share a tradition of values as to the importance of the teaching profession and the work of teachers and researchers, in the wake of student needs, goals, and expectations.

Their experiences with, and as, L2 learners have led them to hold strong regard for the complexity of L2 teaching and learning and the need for informed and sensitive teachers and researchers. Almost all work out of traditional educational institutions, which they value also, as they strive to reform and develop them as needed. Teachers and researchers have long been eclectic and integrative in their approaches, as they have turned to various sources to inform their work, with psychology, linguistics, education predominating.

Finally, teachers and researchers are practical people, often guided by practical goals, with decisions drawn from observation, experience, reflection, consultation, and detailed analyses (See Ellis 1994, 1995; Howatt 1984; Pica 1994a; Richards 1987; Richards & Nunan 1990). Together, they hold similar concerns with respect to the current, future, and potential success of students, and a sense that there is ever so much to be learned, so much to be taught, and so many questions to answer about L2 learning. Such concerns have led them through several transitions in their relationship, as will be noted in the following section.

Transitions in the Teacher-Research Relationship: Relationships of Application

Within earlier relationships of application, arguments configured largely around matters of whether, and in what way, application of one field to the other was necessary or could be useful, as well as to which direction, if any, an application should be made. Consideration was given as to whether research findings were applicable to the development and modification of teaching methods or resolution of teaching issues; or conversely, as to whether teaching methods and concerns should be the basis for research questions that could be examined in the classroom and applied to wider theoretical concerns (See Chaudron 1988; Howatt 1987 for overviews, and Ellis 1994, 1995; Lightbown & Spada 1993; Pica 1994a; Swain 1995 for further illustrations and discussion).

Early research on L2 learning was not related to questions about L2 teaching, but rather, concerned itself with studying the simultaneous ac-

quisition of two languages by young children (See, for example, Leopold 1939-1949). During the late 1940s through early 1970s, however, there was a good deal of connection across the two fields, as quantitative studies were carried out to compare the impact of instructional methods on student achievement (reviewed in Levin 1972). Questions regarding instruction were also addressed through 'contrastive analysis,' as researchers worked within structuralist linguistics and behaviorist psychology to locate differences between forms in the L2 and students' native language (NL), believed to 'interfere' with L2 learning, and to develop lessons in accordance with these findings (Stockwell, Bowen & Martin 1965).

Throughout this period, teachers and researchers grew frustrated as they attempted to understand L2 development and its relationship to students' NL and to features universal to L2 development, and as they tried to explain why certain error patterns and acquisitional plateaus were resistant to instructional intervention. For many years, terms such as 'creative construction' (Dulay & Burt 1974) and 'natural order' (Krashen 1977) dominated the field, reflecting the overall sense that teachers might better serve their students through activities in L2 communication and comprehension than by grammar practice and direct instruction, a point that had already been addressed by Newmark (1966) and others at a somewhat earlier time.

There was also an uneasiness within the field of L2 research about its readiness to enter into a relationship with L2 teaching. As early as 1978, Evelyn Hatch advised researchers to "apply with caution" the results of their studies to teaching matters (See Hatch 1978, and also Tarone, Swain, & Fathman 1976). This set the scene for another relationship, one of implication between teaching and research.

Transition from Application to Implication

Throughout the eighties, researchers continued to look toward the possibility of application, however, and to carry out research that was educationally relevant. Their efforts led influential publications, perhaps the most crucial of which was that of Long (1983a). Entitled "Does instruction make a difference?," this meta-analysis of existing studies on the impact of L2 teaching validated the classroom as an appropriate and advantageous context for L2 learning, the work of teachers as critical to the success of the learner, the input and interaction they could provide as necessary to affect and sustain the learning process.

In subsequent years, researchers continued to warn against direct *applications* of research on L2 learning with respect to the design of L2 teaching; however, they also wrote about its *implications* in this regard (See the collection edited by Hyltenstam & Pienemann 1983 and later; Crookes 1992; Long & Crookes 1993, for example). Along similar lines, L2 research was often discussed with respect to its use as a resource in instructional decision making (beginning with Lightbown 1985, and later, Ellis 1994,

Lightbown & Spada 1993; Pica 1991; and Swain 1995). Questions also arose as to the necessity to look for relationships of application between such interdisciplinary fields as L2 teaching and research, since over the years each had established its own connections to other fields and disciplines (See Sharwood Smith 1994).

Within the field of L2 teaching, however, recent years have brought a greater interest in research. Current methods texts often refer to studies on L2 learning to suggest teaching strategies and instructional activities (See, for example, H.D. Brown 1994; J.D. Brown 1995; Nunan 1991, and the chapters of Long and Richards 1987). Further, teachers have begun to turn toward research as part of the knowledge base they require as professional educators (See J.D. Brown 1992/1993). Increasing numbers participate in research conferences, take courses on language learning, study for advanced degrees, seek professional development, and carry out research within their classrooms (See Bailey & Nunan 1996).

Taken together, these various perspectives and activities for L2 teaching and research depict a relationship that does not preclude 'application.' What they suggest, however, are additional ways in which the two fields can relate to each other. Four of these relationships will be described in the following sections. The chapter ends with discussion of a fifth relationship.

Relationships of Coexistence, Collaboration, Complementarity, and Convergence: An Overview

Distinctions and connections can be seen in the nature, focus and activities of the teacher-researcher relationship. Four relationships are particularly illustrative in this regard. First, there is the relationship of coexistence, in which teachers and researchers hold similar interests, but have different goals, and work independently in their teaching and research. Second, the relationship of collaboration of efforts of teachers and researchers finds them at work on mutual interests and concerns, with an emphasis on action research and ethnographic approaches, as they share in the collection, analysis, and interpretation of classroom data on L2 learning.

Two further teacher-researcher relationships are also well developed. These include a complementarity of skills, as teachers and researchers work together to address questions of language learning that are theoretically motivated, focused on features of learning and retention, require either fine-grained microanalysis or large scale, multi-layered studies, and involve materials and approaches that are teacher and researcher-designed, then implemented and studied in classrooms. Finally, a relationship of compatibility can be seen in teacher and researcher interests in the linguistic, cognitive. and social processes of L2 learning, and in the design and selection of materials and activities that can be used effectively for both teaching and research purposes.

Each of these relationships can also be examined within the context of distinctive factors and important needs. For example, the relationship of coexistence between teachers and researchers has arisen within the context of little need for new relationships between L2 teaching and learning, due to already established relationships with other fields, e.g., educational policy, pedagogical theory, and theoretical linguistics (Sharwood Smith 1994). Conversely, the relationship of collaboration has grown out of a call for relevant research on recurrent classroom issues and interest in contextualized, activist studies (See van Lier 1988). The relationship of complementarity has been nurtured by shared questions about roles of classroom methods, materials, and activities in L2 learning and retention that require careful, micro-level implementation and examination, or massive efforts to evaluate policy change and educational reform. The relationship of compatibility reflects mutual interests among teachers and researchers that have been focused on the role of linguistic, cognitive, and social processes in L2 learning, and on the need for effective, authentic materials in teaching and research. Further discussion of each of these relationships follows below.

Teacher-Researcher Relationships of Coexistence and Collaboration

In their relationships of coexistence and collaboration, teachers and researchers are somewhat polar in their intentions and efforts. Coexistence, in particular, can be noted throughout the early years of the teacher-researcher relationship, as discussed above, as language teachers often looked to theories of pedagogy to meet instructional goals. The notion of a relationship with L2 research suggested, at that time, the application of linguistic methods of contrastive analysis to drills and exercises for the language classroom. Researchers also looked to other fields, particularly linguistics, to inform their early concerns and methods, focused as they were on abstract rules of grammar and complex operations of language structure. The nature of their questions at that time brought little motivation for forging a relationship with teachers, nor for discussing the need for any.

Such a relationship of coexistence endures to date, as can be seen in publications on the teaching of L2 grammar and studies on its learning. The former often reflect pedagogical and linguistic decisions about learner proficiency, based on principles of linguistic complexity or frequency, or the communicative utility and importance of particular structures. The latter are often carried out with respect to structures and processes such as noun phrase heads or pro drop parameters, or deep to surface structures, uncommon to the lexicon of L2 teaching, and unlikely to be used among teachers and students in L2 classrooms. In this way, pedagogical guidelines and lessons on sentence constituents and construction (such as those found Celce-Murcia & Larsen-Freeman 1983; Dart 1992; and Davis 1987) have been able to exist along side of research on universal grammar and

language learning (for example, Eubank 1991) without a threat to the integrity of teachers and researchers in their respective fields. Many teachers and researchers have thus become so established in their concerns, approaches, and relationships with other fields, that there is no need to explain a lack of a relationship between them.

Teacher-Researcher Relationships of Collaboration

A much different relationship between L2 teaching and research is seen when teachers and researchers collaborate on common interests and concerns, through action research and ethnographic study of classrooms, schools, and communities. Such collaboration has been largely the outgrowth of the often expressed need among L2 educators for greater relevance of L2 research to questions regarding classroom practice. This is often revealed, for example, when teachers enrolled in graduate and in-service courses report an academic interest in course content, coupled with a difficulty in connecting this content with their daily classroom life. Teachers also note that the studies they read are seldom designed to solve to particular problems that arise in their classrooms, as these matters tend to be highly contextualized within the societies and communities in which they work (See van Lier 1988 for review and commentary). These are some of the reasons why, as Crookes (1993) suggests, language educators have continued to turn toward action oriented research on their own classrooms. This enables them to sort out the different ways in which research can, and cannot, help them with classroom particulars, and to understand, reflect upon, and modify their practice. Many classroom teachers work directly with researchers in these efforts, as the following section will illustrate.

Teachers and researchers often work together on case studies of individual students. The detailed profiles that they produce often have larger implications for instruction and promotion of L2 learning (See, for example, Adamson 1993; Kreeft-Peyton, Jones, Vincent & Greenblatt 1994; Peyton & Mackinson 1989). Such collaboration can also be found in ethnographic studies, as L2 teachers and researchers work together to address questions about the cultural context of their classrooms, schools and communities. Here, collaboration may extend beyond that of teacher and researcher, to embrace other members of the cultural context within classroom, community, and school (See Edelsky 1986, 1991; Hornberger 1994; Freeman 1996; Kuiper & Plough in Schachter & Gass 1996; Rounds in Schachter & Gass 1996).

Teacher-Researcher Relationships of Complementarity

The fields of L2 teaching and research have also displayed an increasing complementarity of contributions among educators and researchers to combine their skills in addressing shared interests and concerns. Such work

is leading toward a more complete picture of L2 learning and retention through processes of intervention, designed and initiated in the research context, and extended into pedagogical contexts through short-term, classroom experiments and longer interventional studies.

In classroom experiments that illustrate such complementarity, theoretically grounded learning materials and strategies are selected or developed by researchers. The researchers then work with participating teachers toward classroom use of these materials and strategies, followed by research carried out in their classrooms on their impact on students' learning. Often the materials and strategies are chosen through joint efforts of the researchers and teachers, working together to respond to mandates from policy makers and administrators within the context of large-scale curricular change. In keeping with procedures for experimental design, control and comparison groups of other teachers and students also participate. One of the earliest experimental efforts of this kind is exemplified in work of Long, Brock, Crookes, Deicke, Potter & Zhang (1984), who provided L2 teachers with training on how to prolong the amount of wait time they gave English L2 learners to respond to their questions, then studied the impact of this instructional strategy on qualitative features of student response.

Perhaps the most exciting developments toward complementarity are taking place in Canada, through classroom experiments on immersion programs and work in experimental classrooms in English as a second language (See, for example, Lightbown 1992). In immersion classrooms, researchers have examined the immediate and long term impact of instructional materials and strategies, designed to assist the learning of difficult L2 structures. Harley (1989), for example, provided teachers with functional materials that had been created to assist learning of two French verb forms for past time reference which posed considerable difficulty for students. These were the imparfait, or habitual past, and the passe compose, or specific past. The teachers encorporated these materials into their teaching over an eight week period. Harley then studied the impact of the teachers' instruction by comparing students' learning in these classes with that of students in control groups.

Using a slightly longer period of research, Day and Shapson (1991) provided teachers with a curriculum of classroom activities, strategies, and materials. The materials, both functional and form-focused in scope, had been prepared by teams of teachers and researchers, with support from school administrators and policy makers. In both the Harley and the Day and Shapson studies, researchers were able to observe participating classrooms in the months that followed these interventions, to monitor the presence of the targeted structures in teacher input. This information helped to explain results of subsequent testing on student retention.

Another illustration of complementarity can be found in a series of experiments, again in Canada, in which researchers have tracked the impact

of theoretically motivated instructional strategies as they are employed by teachers in classrooms for English language learning (See, again, Lightbown 1992; Lightbown & Spada 1990). Of particular interest have been the ways in which strategies such as form-focused instruction and correction assist students' learning of the rules and structures involved in adverb placement (White 1991) and question formation (Lightbown & Spada 1993). These features were chosen for instructional treatment because of their resistance to the communication oriented methods through which they had been typically taught. During the treatment period, participating teachers continued to teach communicatively, but accompanied their activities with instructional intervention and corrective feedback for adverbs and questions. In the months that followed the treatment period, the teachers resumed their regular teaching style and format to set the context for the researchers' follow up testing on retention of the treatment structures.

Teaching and research undertaken within the scope of complementarity can also involve contributions at levels of responsibility beyond those of L2 teachers and researchers, as policy makers from ministries of education, school boards, and administrations, become involved in the establishment, modification, or evaluation of language programs. Teams of teachers, researchers, and curriculum specialists might be recruited to develop classroom materials and strategies, with application to experimental intervention, ongoing research, and follow up testing. These group efforts are, unfortunately, not always complementary, as the goals and values of the policy makers may be inconsistent with those of the teachers, researchers, and L2 learners. Instead of a process of complementarity, then, a process of conflict might arise. This has long been a concern among many educators, most recently among those who write within the perspective of critical pedagogy (See, for example, Pennycook 1989, 1990).

Teacher-Researcher Relationships of Compatibility

Many of the relationships between language teachers and researchers are formed outside of the kinds of collaborative or complementary undertakings that involve specific projects, as described above. Such relationships appear to be more fluid and informal, as they are shaped by a compatibility of teacher and researcher interests in the cognitive and social processes of language learning, and in the instructional strategies and research techniques through which they carry out their work with language learners. Such compatibility of interests and activities often goes unnoticed because of the variation in terms and labels that are used within and across their respective fields.

Numerous cognitive processes are of mutual interest to teachers and researchers. Among the most prominent are the learner's comprehension, planning, and production of message meaning, the learner's ability to attend to language form as it shapes message meaning and to use feedback

toward modification and accuracy. Of growing interest to teachers and researchers are the cognitive aspects of learner motivation toward language learning, including the role of effort and attention to learning processes and outcomes. As teachers and researchers note that the cognitive processes of L2 learning are difficult to separate from its social dimensions, they maintain a mutual interest in various forms of communication and interaction, ranging from collaborative dialogue to instructional intervention, and a concern for the ways in which learners and interlocutors negotiate meaning and engage in conversational revision and repair. Each of these cognitive and social processes will be discussed below.

Interest in Cognitive Processes

Both teachers and researchers have held a long and abiding interest in the process of comprehension as it relates to successful language learning (See, for example, Long 1985). With respect to teaching, comprehension based methods and materials have been advanced in a variety of ways. Some have been studied experimentally (See, Postovsky 1974; Gary & Gary 1980), while others have been developed and disseminated on an independent basis through methods such as Total Physical Response (See Asher 1969). Perhaps the most widely known comprehension-based method is the Natural Approach, a variation of Communicative Language Teaching, whose roots are situated in the efforts of two individuals, Stephen Krashen and the late Tracey Terrell, the former one predominantly a teacher educator and researcher, the latter, predominantly a foreign language teacher, both of whom brought extensive background and experience in teaching and research to their work on L2 learning (See Krashen & Terrell 1983).

It was Krashen, in fact, who made the term, 'comprehensible input,' serve as the context of the L2 learning process. According to Krashen, when learners understand message meaning, this frees their attention to access unfamiliar words and structures encoded therein, and thereby build their grammar for the L2 (See, for example, Krashen 1981, 1983, 1985). Recent studies of learners engaged in comprehension suggest that simultaneous attention to form and meaning is difficult and frequently unsuccessful (van Patten 1990). The argument has been made that it is actually learners' 'incomprehension' of L2 input that is what enables them to draw their attention to L2 form and meaning. This has been shown in studies on learners' attempts to comprehend the meaning of messages encoded with relative clauses (Doughty 1991), locatives (Loschky 1994), and pre- and post-modifiers (Pica 1994b). Pinpointing the exact role of comprehension in the learning process will continue to pose challenges. As such, it will no doubt maintain an important place among the processes of mutual interest to L2 teachers and researchers.

Message planning and production have also captured the interest of teachers and researchers. Interest in the planning process has been shown

in the teaching of L2 composition and writing which emphasizes the precision needed for communication of message meaning, as attained through discussion and revision of the written text (See, for example, the volume of Johnson & Roen 1989; Zamel 1983). Researchers have been especially interested in the ways in which planning and production processes draw learners' attention to the preciseness of form they need for communication of message meaning, which, in turn, has a positive impact on their L2 learning. The positive effect of planning has been shown for English articles (Crookes 1989) and past regular inflections (Ellis 1987).

Production has long held a prominent place in language classrooms, in activities ranging from drills on sounds and structures to communication tasks requiring message planning. However, production has not gained the interest of L2 researchers until recently. This may be because the researchers had regarded learner production as intrusive to the learning process, especially during the early stages of development, when comprehension was believed to be critical (See again, Krashen 1983, 1985). As the L2 research field developed, however, studies suggested that learner production might play an important role in activating and sustaining cognitive processes of L2 learning, by providing a context in which learners might be able to compare their own production with L2 input, and "notice the gap" between them. Much of this research was initiated and implemented in classrooms and community settings in Brazil. (See Schmidt & Frota 1986).

Increasingly, research related to the classroom context has shed light on the contributions of production to L2 learning, thereby providing an empirical basis for the kinds of practice and communication activities that have been a consistent feature of L2 teaching. Classroom experiments have revealed how learners' production, if accompanied by responses of feedback, can facilitate their awareness of rules and help them distinguish irregularities and exceptions among them (Tomassello & Herron 1988, 1989). Other classroom-oriented studies have shown how production can draw learners' attention to the clarity and complexity of form needed for message meaning (See Gass & Varonis 1994; Linnell 1995; Pica, Holliday, Lewis, & Morgenthaler 1989; Pica, Holliday, Lewis, Berducci, & Newman 1991; Pica 1994b, 1996; Pica Lincoln-Porter, Paninos & Linnell 1996; Swain & Lapkin 1994).

Motivation has long been of interest to language teachers and researchers with respect to its role in the affective dimensions of L2 learning. Recently, however, researchers have also begun to regard motivation as a cognitive process in language learning, this largely through the work of Crookes and Schmidt (1991), who have operationalized motivation in terms of learners' attention to, persistence with, and active involvement in L2 learning activities. According to these researchers, this definition was drawn largely from teacher views and observations about what constitutes motivation among their students.

The cognitive process of attention has recently captured the interests of

researchers, particularly with respect to the learners' need to notice relationships of L2 form and message meaning. This learning process has been encorporated into a variety of constructs such as "consciousness raising" (Rutherford & Sharwood Smith 1985), "noticing" (Gass 1988; Schmidt 1990, 1992), and "focus on form" (Doughty 1991; Doughty & Williams 1998; Long 1991a, 1991b, 1996). Among teachers, the process of attention finds compatibility with the notion of language awareness, illustrated, for example in the work of Stevick (1976). A methodologist, Stevick wrote about the learner's need for attentiveness and involvement toward L2 input. In more current work, the notion of attention can be located in a conceptualization of grammar learning as sensitivity to rules and forms in relation to communication of meaning (See Nunan 1993). The scope of interest in language awareness as a classroom construct is further evident throughout the volume edited by James and Garrett (1991).

Interest in Social Processes

The social processes of language learning have been a consistent focal point in the field of L2 teaching, particularly in its methods, materials, and classroom practices that emphasize communication as a goal of L2 learning and the process toward which that goal is accomplished. Communicative interaction has also been at the forefront of theory and research, for its role in generating the cognitive processes discussed above, and in activating conditions claimed to play a role in successful language learning.

Among the social processes of mutual interest and implementation shared by teachers and researchers, peer interaction and collaborative dialogue have held major importance. Both of these practices emphasize the work of L2 learners and other learners as they interact in conversational groups and dyads, and have been discussed extensively throughout the wider field of education, particularly within the context of a classroom practice known as cooperative learning. (Kagan 1986; Slavin 1982).

As L2 researchers have shown, the support provided through peer activities offers learners a context for L2 learning through which they can understand linguistic input, produce output, and respond to feedback through modified production (See, for example, Doughty & Pica 1986; Ellis, 1985; Gass and Varonis, 1985, 1986, 1989; Long and Porter, 985; Pica & Doughty 1985a, 1985b, Pica et al 1996; Porter 1986; Swain & Lapkin 1994). The study of peer conversational interaction has also drawn attention to the differential contributions of input from native and non-native speakers to the cognitive and social processes of L2 learning (See, again, Gass & Varonis 1985, 1986, 1989; Pica & Doughty 1985a, 1985b; Pica et al. 1996; as well as Plann, 1977; Wong Fillmore 1992). Such research can help to inform decisions as to classroom management and professional development of teachers.

Of particular interest to L2 researchers has been a social process known

as the negotiation of meaning (Long 1983b; Pica 1994). During negotiation, learners and interlocutors repair, modify, and restructure their interaction for purposes of mutual message comprehension. In so doing, they adjust their input in order to understand the meaning of each other's messages and to convey their own message meanings. To accomplish these ends, learners and interlocutors generate, and respond to, each other's signals about their message incomprehensibility. This in turn can lead to modifications which enable learners to access comprehensible second language input both directly (Doughty 1991; Pica, Young and Doughty 1987), and by merely observing other learners negotiate (Mackey 1995; Pica 1991). Their participation in negotiation also provides learners with feedback on their use of vocabulary and morphosyntax (Long 1996; Pica et al. 1989), and offers them a context in which to modify and syntacticize their output, particularly to signals encoded as clarification requests and open questions (See Pica et al. 1989, 1991, 1995; Linnell 1995 for individual studies and also Larsen-Freeman & Long 1992; Pica 1993, 1994b, 1998 for overviews).

Much of the research on negotiation carried out in experimental classrooms and classroom-like contexts has been implicational (as defined earlier in this chapter). As such, findings from this research have had important implications for classroom instruction and management. Yet, research on actual classrooms has shown that very little classroom communication consists of negotiation, despite the presence of communication of various kinds, across different groupings of teachers and students. Rather, classroom communication is more typically characterized by transmission of information, discussion of opinions and ideas, and teacher-initiated 'display' questions whose answers are already known to the teacher (See, for example, Long & Sato 1983; Pica & Long 1986).

Thus, the process of communication has continued to enjoy compatibility of interest between the fields of L2 teaching and research, but its actualization has been quite different within the research and classroom context. This is why, as will be discussed in the following section, there is much promise in efforts toward adapting and developing classroom tasks that engage learners in communication as they also activate their participation in negotiation.

Interest in Processes of Implementation

A growing area of compatibility between teachers and researchers is found in their use of communication tasks in work with L2 learners. By definition, such tasks emphasize two important elements: They involve participants in the exchange of information and in communication toward an outcome or goal (See Pica, Kanagy and Falodun 1993 for review). As classroom activities, communication tasks provide learners with a context for meaningful, purposeful language learning and language use (Long & Crookes 1993; Prabhu 1987). As instruments for data collection they can be

used in a variety of ways. For example, communication tasks can be targeted toward the generation of input, feedback, and output conditions to assist researchers in their study of L2 learning (Crookes & Gass 1993; Long & Crookes 1993; Pica, Kanagy & Falodun 1993). In addition such tasks can be used to obtain samples of specific, highly complex grammatical features that can be avoided during informal classroom communication or conversational interaction (Mackey 1994, 1995). Finally, they can be tailored to encourage conversation that requires structural forms and features, whose impact on learning can then be monitored (Day & Shapson 1991; Doughty 1991; Harley 1989; Linnell 1995).

The communication tasks considered most helpful for L2 learning are those that enable learners to create a learning context for themselves. The most helpful tasks are therefore tightly constrained with respect to the elements of information exchange and outcome; as such, information exchange is required among all task participants, and only one goal is possible as a result of such exchange. In that way, the execution of the task can succeed only if each participant holds information that must be shared among others in order to effectively accomplish its purpose. This insures, as closely as possible, that in carrying out the task, learners will work together to achieve message comprehensibility, by providing each other with input, feedback and modified production, as needed for communication, and, in turn, as a basis for their learning.

Classroom communication tasks currently in use fall somewhat short of addressing learner needs for L2 learning. Typically, they involve participants in decision-making and opinion-sharing that do not require unanimous participation in the exchange of information, nor accomplishment of one particular goal or outcome. As such, one or two learners may dominate the communication process, while others become distracted or inattentive (Again, see Pica, Kanagy, & Falodun, 1993 for review and analysis of relevant studies).

There is one additional problem about communication tasks that is shared by teaching and research contexts, alike: Even those tasks shown to engage learners in input, feedback, and production processes for L2 learning have been found to fall short in drawing their attention to the L2 forms and structures they need as well. Instead, task participants often exchange information and work toward task goals through the use of paraphrase, word substitution, and elaboration. Such message adjustments and modifications inevitably engage them in manipulation of grammatical form as well, but these manipulations are not found consistently overall, nor are they necessarily directed toward individual forms in need of further development (See Pica 1994b for discussion, and Pica et al. 1989, 1991, 1996 for relevant research). The challenge, then, is for teachers and researchers to design tasks that guarantee the occurrence of such grammatical adjustments and thereby direct learners' attention to form in the communication of meaning. In that regard, there is a great deal of promise on several fronts,

including grammar oriented communication tasks and dictogloss activities, as described below.

The Teacher-Researcher Relationship: Developments and Directions

Thus far, the most successfully designed grammar oriented communication tasks involve learners in communication that focuses their attention on specific grammatical areas that are resistant to purely communicative activities in the classroom (Loschky & Bley-Vroman 1993; see also Pica et al 1996). Researchers have found such tasks difficult to design, however, because, given the range of forms that can be used to convey any one message meaning, there is no guarantee that learners will focus on the specific form needed to advance their L2 learning. This pattern was evident, for example, in a study on learner communication during a story task. There, learners who needed to focus on past tense markers to describe story actions and activities chose to describe the people in the story instead, thereby focusing on devices of noun pre- and post-modification (Again, see Pica et al. 1996).

A second type of grammar oriented communication task, known as the communicative, grammar-based task, engages learners in collaboration, decision making, and opinion exchange in order to complete grammar focused activities (Fotos & Ellis 1994; Fotos 1992). Such activities can be easily adapted from grammar exercises, test items, and textbook entries that owe their origin to the field of L2 teaching. Indeed, the reported effectiveness of these tasks for language learning provides a rationale for modification of the traditional classroom staple of teacher-conducted grammar exercises for use in student pair work in problem solving and discussion.

Finally, the dictogloss, an activity whose origins are in the field of language teaching (as described in Nunan 1989; Wajnryb 1994), has been shown to be successful in the research context in terms of drawing learners' attention to linguistic forms and features as they communicate message meaning (See Swain 1993). In the dictogloss, learners are presented with an oral text, which has been composed or adapted from an original text to highlight specific grammatical forms or structures needed for the communication of its meaning. Such a text might build an argument through its use of modals, or relate a story with a plot dependent on verb tense and aspect. As the text is read by a teacher or researcher, learners first take individual notes. Then they are assembled into pairs and groups in order to work together to reconstruct the text. As a result, they compose various individual and collective versions until they arrive at a single reconstruction to share with their classmates.

What makes these three types of tasks especially exciting is that they have great relevance for both teaching and research contexts and concerns. Developing tasks that focus learners' attention on L2 grammar in the interest of communication is one of the most challenging areas of work around

which teachers and researchers have found increasing compatibility. Indeed, this enterprise appears to be moving teachers and researchers toward yet another relationship, in which there is convergence with respect to teacher and researcher interests, activities, efforts, and goals.

Such a highly focused relationship of convergence of teachers and researchers, moreover, can counterbalanced by another, very expansive view, one which integrates the relationships of coexistence, collaboration, complementarity, and compatibility, reviewed so far. It is this approach to convergence that can be seen in the relationships described and summarized below.

Teacher-Researcher Relationships of Convergence

A project is currently underway which illustrates convergence across the four relationships discussed above. As such, it brings teachers and researchers together as they focus on issues and interests of considerable compatibility, collaborate in classroom implementation of new instructional formats, engage complementarily in teaching and research, and yet coexist with other professional educators whose work takes them in different directions across school and university settings.

The purpose of this project is to identify and understand the scope and contributions of subject matter, content-based approaches to L2 instruction, in light of concerns about their sufficiency in meeting learners' needs to access meaningful, comprehensible L2 input, and to modify their production of output in response to feedback.

In its simplest terms, Content-Based Second Language Teaching (CBLT) may be defined as the integration of the L2 and subject matter content in teaching processes as well as in learning outcomes (as in Brinton, Snow, & Wesche 1989). Many language educators view CBLT as yet another variety of communicative language teaching. Indeed, the two approaches have much in common procedurally, with respect to their mutual emphases on the use of authentic and actual materials and interactive activities in the classroom. However, the goal of CBLT is for students to learn content as well as language; thus, content is sustained across numerous class meetings. On the other hand, communicative language teaching is directed primarily toward L2 learning. As such, it need not be bound to a sustained content area, but can be re-structured within or across class meetings on the basis of notional, functional, or situational categories, as needed.

Much of the current confidence in CBLT as an approach to L2 instruction has been based on the widely held view that CBLT provides opportunities for students to keep up with classmates in mainstream subjects, to learn the L2 skills they need to master subject-matter content, and to do so in ways that are of interest, relevance, and importance to their academic and professional goals. Thus, there is an expanding application of this approach to L2 instruction.

However, concerns about the effectiveness of CBLT for both L2 teachers and L2 learners have emerged, these largely from teachers and researchers themselves, who often bring their own views and experiences to such concerns, but do so in ways that are highly compatible. While teachers query the soundness of making L2 professionals responsible for academic and specific purpose content, researchers question whether the content itself, no matter how interesting, meaningful, and accurately provided, is sufficient to assist the L2 learner in an efficient and effective manner. Despite their compatibility among teachers and researchers, however, such concerns simply coexist, as they lose priority to other matters of classroom management and syllabus design, and research agendas that require an adequate subject pool.

Against this backdrop of teacher-researcher compatibility of concern and coexistence of activities, collaborative as well as complementary relationships surrounding issues of CBLT are ongoing as well. In the current project, for example, subject-matter content teachers are pursuing research interests by examining their own classrooms (See Boyd-Kletzander, forthcoming) and working complementarily in teams (as in Pica, Washburn, Evans, & Jo 1998; Shah, forthcoming).

Research questions in the various ongoing and completed studies within the project have asked whether the interaction over academic content and skills in CBLT classrooms also provides a context for learners to (1) access positive, comprehensible L2 input, (2) be given negative input or feedback on the comprehensibility and accuracy of their output, (3) produce output, modified for comprehensibility, accuracy, and morphosyntactic development, and (4) attend to relationships between L2 form and meaning within their input and output. These conditions have been identified and described extensively in Lightbown and Spada (1993), Long (1996), Pica (1998), and Sharwood Smith (1991). In addition, the studies address the question of whether CBLT interaction offers learners a context that is similar to, or distinct from, that found in classrooms whose focus is on grammatical features or academic skills.

Data have consisted of audio and video tapings collected during teacher-led discussion in advanced-level, pre-academic CBLT classrooms in American culture in film and literature, and during teacher-led, and individual sentence construction exercises in comparable level grammar-focused classrooms. These activities were chosen for data collection, as evidence from earlier and ongoing anecdotal comments and classroom observation indicated that they constituted the dominant mode of interaction in the L2 content-based classroom. The data have been coded through categories derived from current theoretical and empirical perspectives on L2 learning, i.e., the four input, output, and form-meaning conditions identified above.

Analysis of the CBLT data thus far has revealed a high incidence of positive L2 input in the form of words and their meanings, often through teacher responses to requests, and a low incidence of teacher or peer nega-

tive feedback to learners, this despite a relatively high proportion of learner non-target utterances. Negative feedback has been found to be confined mainly to learners' non-target contributions that are brief and one utterance in length. Such learner utterances have been relatively infrequent in the CBLT data, however. Instead, the CBLT learners have been shown to produce multi-utterance texts, most of which are comprehensible, but replete with non-target productions of grammatical features, during which there is minimal intervention by teachers or peers, beyond simple backchannelling and topic continuation moves.

Interaction in the grammar focused classrooms under study has been shown to differ considerably, as the sentence construction activity, so characteristic of these classrooms, has been found to generate numerous learner productions of single utterance length, then followed by utterances of negative feedback from teachers and peers. There is very little tendency, however, for the learners to engage in multi-utterance discourse in response to such feedback. Such brief productions of L2 output thus also keep them from the kinds of modified output considered crucial for syntactic development.

Analysis thus far suggests that the differences in the availability and frequency of important L2 developmental features in the content-based and grammar-focused classrooms might be an outcome of the activity types used rather than due to the content vs. grammar focus itself. Thus, it appears that distinctions in classroom type, i.e., content vs. grammar-focus, may be less relevant to these results than the activities in which teachers and students engage. The next step in the research, therefore, will be to introduce grammar-based and dictogloss communication tasks in the hope that they will facilitate interaction in ways more consistent to L2 learning processes. Such a challenge will continue to promote convergence across these relationships of teachers and researchers already in place, and may, indeed, lead to new relationships among them, as well as to greater scope and dignity throughout the field of language education.

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